Sidong Feng
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Education

- **Monash University** — Melbourne, AU
  Philosophy of Doctor; Full Scholarship
- **Australian National University** — Canberra, AU
  Bachelor of Software Engineering (Honors) ; top 5% — *Feb. 2016 – Dec. 2019*

Projects

- **Extracting User Behaviors from App Recording**
  Dr Chunyang Chen (Monash University) — *Apr 2020 - Sep 2021*
  - **Purpose**: Develop a deep learning based approach based on user behavior perception to segment GUI scene transition graph and infer actions from app recordings. *Under Review of* [CHI 2022 (CORE A*)]
- **Automated Replay of Visual Bug Reports for Android Apps**
  Dr Chunyang Chen (Monash University) — *Mar 2021 - Aug 2021*
  - **Purpose**: Present a light-weight image-processing based approach to reproduce bugs for Android apps directly from the screen recordings. *Under Review of* [ICSE 2022 (CORE A*)]
- **Inference of Perceptual Groups from GUI Images**
  Dr Chunyang Chen (Monash University), Prof Zhenchang Xing (Australian National University) *Apr 2020 - Sep 2021*
  - **Purpose**: A robust, psychologically-inspired, unsupervised visual inference method for detecting perceptual groups of GUI elements on GUI design images. *Under Review of* [ICSE 2022 (CORE A*)]
- **A Hybrid Tool for GUI Element Detection**
  Prof Zhenchang Xing (Australian National University), Dr Chunyang Chen (Monash University) *Feb 2020 - June 2020*
  - **Purpose**: Develop a novel GUI-specific detection method to acquire elements from GUI and present an interactive web application (http://uied.online) for further research development.
- **Discover Missing UI Design Semantics through Recovering Missing Tags**
  Prof Zhenchang Xing (Australian National University), Dr Chunyang Chen (Monash University) *July 2019 - Feb 2020*
  - **Purpose**: Incoherent tag usage and missing tags in collaborative tagging system hinder poor GUI retrieval. We construct a vocabulary for UI design semantics and develop a hybrid deep learning method for recommending semantic tags.
- **Design Search & Knowledge Discovery through GUI Component Gallery**
  Prof Zhenchang Xing (Australian National University), Dr Chunyang Chen (Monash University) *Nov 2018 - Nov 2019*
  - **Purpose**: To meet the requirement of design practicality, design granularity and design knowledge discovery, we develop reverse-engineering and computer-vision techniques to transform half a million real-world GUI screenshots into a large-scale design gallery (http://mui-collection.herokuapp.com).
- **Dynamic Facial Stress Recognition in Temporal Convolutional Network**
  Professor Tom Gedeon (Australian National University) — *Feb 2019 - Jul 2019*
  - **Purpose**: Develop a convolutional based model to recognize human facial stress when watching movies.
- **Implementing Mathematical Functions in a Unum Library**
  Dr Josh Milthorpe (Australian National University) — *Feb 2018 - Jun 2018*
  - **Numerical Computation**: Achieve high-performance computing for a new numerical arithmetic.

Experience

- **Alibaba Group** — Hangzhou, CN
  Research Intern — *Aug 2020 - Feb 2021*
  - **Code Generation for Icon Designs**: Develop machine-learning and deep-learning based techniques to generate readable and efficient code for icons from the design artifacts. [**Highlight** in IUI 2021 (CORE A)]
  - **GUI Layout Parsing**: Develop a heuristic-based recursive traversing algorithm to infer the association relationship between GUI elements. *Under Review of* [ICSE-SEIP 2022 (CORE A*)]
- **NUS Research Institute** — Suzhou, CN
  Research Intern — *Apr 2020 - Aug 2020*
  - **Real-Time Water Measurement**: Propose a fast scene parsing model mounted on self-driving UAV for segmenting algae region and identifying its pollution. [**Top** solution in Huawei AI project of Smart City]
  - **Practice for Past Exams**: Propose a text-shape-recognized segmentation model to remove the handwritten answers from the past exam papers. *Under Review of* [CSCW 2022 (CORE A)]
- **Civilise.ai** — Canberra, AU
  Software Developer Intern — *Jul 2018 - Nov 2018*
  - **Urban Planning**: Develop computer vision method to assess city landscape changes relative to geographic factors
- **OK RDY** — Canberra, AU
  Software Developer Intern — *Feb 2018 - Jul 2018*
  - **Mentor Matching**: Mitigation of malicious attacks on networks of mentor-and-student
- **China Life** — Suzhou, CN
  Software Developer Intern — *Nov 2017 - Feb 2018*
  - **Cross-device Adaptive GUI**: Adopt rule-based method to generate flexible GUI layouts

Publications

- **S. Feng**, S. Ma, J. Yu, T. Zhou, Y. Zhen. "Auto-icon: An Automated Code Generation Tool for Icon Designs Assisting In UI Development", [**Highlights in IUI 2021 (CORE A)**].
- C. Chen, **S. Feng**, Z. Liu, Z. Xing, S. Zhao. "From Lost to Found: Discover Missing UI Design Semantics through Recovering Missing Tags", [**CSCW 2020 (CORE A)**].
- M. Xie, **S. Feng**, Z. Xing, J. Chen, C. Chen. "UIED: a hybrid tool for GUI element detection", [**ESEC/FSE 2020 (CORE A)**].
- **S. Feng**. "Dynamic Facial Stress Recognition in Temporal Convolutional Network", [**ICONIP 2019 (CORE A)**]. This paper is also published in ANU Bio-inspired Computing conference [**ABCs 2019**].
- C. Chen, **S. Feng**, Z. Xing, L. Liu, S. Zhao, J. Wang. "Gallery D.C.: Design Search and Knowledge Discovery through Auto-created GUI Component Gallery", [**CSCW 2019 (CORE A)**].

Awards

- Selected Alibaba Global Talent Development Program [at Alibaba]
- 1st solution in Huawei AI project of Smart City (with $120,000 project investment). [at NUSRI]
- Top 5 Award in Innovation ACT 2018 (with $8,750 grant). [at Civilise.ai]
- A primary intent of cooperation with the Queanbeyan council, NSW, Australia. [at Civilise.ai]
- 'Start-up of the Year' award in the Digital Canberra iAwards 2018. [at OK RDY]
- 1st student graduated from high school [at BMGS high school].
- Top 20% in Australian CommonWealth Mathematics Competition [at BMGS high school].
- Half Tuition Scholarship [at BMGS high school].

Teaching

- Co-supervisor in Monash Graduate Course FIT3170 (Software Engineering Practice) — *2021 FY*

Personal

- Paper Art Design, Certified Skydiver, SSI Water Diver, Amateur Go rank 2 dan